Index to Volume 15

How to Use This Index

This Index is of similar form to the Cumulative Index of this journal, published in November, 1939, and is composed of two main divisions: the Author Index and the Subject Index.

The Subject Index to Volume 15 of *The Journal of the Acoustical Society of America* lists the titles of all the papers, abstracts, and patents under twelve section headings as follows: 1, Acoustical Society of America; 2, Architectural Acoustics; 3, Books and Bibliographies; 4, Ear and Hearing; 5, Applied Acoustics. Instruments and Apparatus; 6, Musical Instruments and Music; 7, Noise; 8, Standards; 9, Speech and Singing; 10, Supersonics; 11, Waves and Vibrations; and 12, General, Unclassified. Each of these sections is further divided into a considerable number of decimally numbered subjects, which are listed below under the heading, "Classification of Subjects." Each subject is divided into four parts entitled Papers, Subtitles, Abstracts, and Patents. Under Papers will be found the original titles of all the papers appearing in the journal on that subject. Under Abstracts are listed the titles of the papers presented at meetings. Since a great amount of valuable material appears in the journal in papers whose titles cannot fully describe all the subjects which the papers cover, some subtitles of papers have been indexed under the heading Subtitles. When subtitles covering the material did not appear in the paper, they were written; the captions of some of the figures were also included under this heading. Thus, while the Subtitles portion of the index is informal, it is hoped that it will increase the probability of finding the desired information quickly. All patents appearing in the journal are listed under the heading Patents.

References on most subjects can be located immediately by a logical use of the Classification of Subjects below. In case the reference sought is of an unusual character such that there is uncertainty as to the subject under which it might have been classified, this can usually be found quite quickly by the process of eliminating the sections and subjects under which it is quite improbable that it might have been listed. In case of doubt, a title has often been listed under a number of subjects.

Obviously, the Author Index is more convenient than the Subject Index when one knows the name of the author of the paper in which he is interested.

The References to Contemporary Papers on Acoustics are identified in each issue by the same decimal numbers listed below, and may be consulted for references in other journals than our own. In Volume 15 these references will be found on pages 65, 139, 190, and 227.

Classification of Subjects

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Bauer, B. B. Notes on radiation impedance. **15:** 223—1944

Beers, G. L. and C. M. Sinnett. Recent developments in record reproducing systems. **15:** 79(A)—1943

Benedict, Claire. Acoustical characteristics apparent in a new anatomy of the human voice. **15:** 77(A)—1943

Bennett, W. R. Response of a linear rectifier to signal and noise. **15:** 164—1944

Binder, R. C. Damping of large amplitude vibrations of a fluid in a pipe. **15:** 41—1943

Bolt, R. H. and A. A. Petrauskas. Acoustic impedance meter for rapid field measurements. **15:** 79(A)—1943

Boner, C. P. and R. B. Newman. Overblowing of organ pipes. **15:** 76(A)—1943

Brailsford, H. D. Some experiments on an elephant bell. **15:** 180—1944

Bundy, F. P., W. A. Pliskin, and J. E. Edwards. Vibration characteristics of "free-free" circularly curved bars. **15:** 76(A)—1943

Burris-Meyer, Harold. Introduction to music in industry. **15:** 77(A)—1943

Byers, W. H. (see Pielemeier, W. H.) **15:** 17—1943

Cardinell, R. L. Statistical method in determining the effects of music in industry. **15:** 78(A), 133—1943

Carlisle, Richard W. Conditions for wide angle radiation from conical sound radiators. **15:** 44, 79(A)—1943

Carter, Howard A. Estimation of percentage loss of hearing. **15:** 77(A), 87—1943

Content, Edward J. Acoustics for broadcasting studios for speech *versus* music. **15:** 80(A)—1943

Davis, Hallowell. Book review. **15:** 138—1943

—— (see Galambos, Robert) **15:** 77(A)—1943

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Fleischmann, Lionel. Extension of the Doppler principle to discontinuous periodic effects. **15:** 103—1943

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Galambos, Robert (see Morgan, Clifford T.) **15:** 77(A)—1943

—— **and Hallowell Davis.** Inhibition of auditory nerve activity by acoustic stimulation. **15:** 77(A)—1943

Gorton, W. S. Demountable soundproof rooms. **15:** 80(A)—1943

Green, Lonsdale, Jr. Materials and construction for speech broadcasting studios. **15:** 80(A)—1943

Gross, Nathan (see Lowy, Karl) **15:** 160—1944

Halpin, Dan D. Industrial music and morale. **15:** 77(A), 116—1943

Hardy, Howard C. Use of the Pierce interferometer for measuring the absorption of sound in gases. **15:** 91—1943

Hough, Edith. Effect of music on accident reduction. **15:** 78(A)—1943

—— Music as a safety factor. **15:** 124—1943

Katel, I. E. Sound-proof airplane motor test chambers. **15:** 115—1943

Kent, Earle L. New frequency selective vibrometer. **15:** 79(A)—1943

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Knauss, H. P. and J. G. Woodward. Steady state of sound in a room. **15:** 80(A)—1943

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Kobrak, H. G. Direct observations of the acoustic oscillations of the human ear. **15:** 54—1943

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Lowy, Karl and Nathan Gross. Experiments on Dr. Pohlman's mechanical hearing aids. **15:** 160—1944

Mason, W. P. Book review. **15:** 189—1944

Morgan, Clifford T. and Robert Galambos. Reinvestigation of the relation between pitch and intensity. **15:** 77(A)—1943

Morse, Philip M. Book review. **15:** 227—1944

Newman, E. B. Book review. **15:** 64—1943

Newman, R. B. (see Boner, C. P.) **15:** 76(A)—1944

Olson, Harry F. Acoustic laboratory in the new RCA laboratories. **15:** 80(A), 96—1943

Pepinsky, Abe. Growing appreciation of music and its effect upon the choice of music in industry. **15:** 78(A)—1943; 176—1944

Petrauskas, A. A. (see Bolt, R. H.) **15:** 79(A)—1943

Pielemeier, W. H. Supersonic measurements in CO_2 at 0° to 100°C. **15:** 22—1943

—— **and W. H. Byers.** Supersonic measurements in CO_2 and H_2O at 98°C. **15:** 17—1943

Pliskin, W. A. (see Bundy, F. P.) **15:** 76(A)—1943

Rice, S. O. Filtered thermal noise—fluctuation of energy as a function of interval length. **15:** 79(A)—1943

Sabine, Hale J. and R. Allen Wilson. Application of sound absorption to factory noise problems. **15:** 27, 80(A)—1943

Salmon, Vincent. Letter to the editor. **15:** 225(L)—1944

Saunders, F. A. Criteria of excellence in violins. **15:** 76(A)—1943

Schuck, O. H. and R. W. Young. Observations on the vibrations of piano strings. **15:** 1, 76(A)—1943

Selvin, Ben. Programming music for industry. **15:** 78(A), 131—1943

Sinnett, C. M. (see Beers, G. L.) **15:** 79(A)—1943

Strommen, Einar. Statistical trends among hearing aid users. **15:** 211—1944

Trimmer, John D. On subjective tones. **15:** 136(L)—1943

Watson, Norman A. and Vern O. Knudsen. Ear defenders. **15:** 153—1944

White, William Braid. Mean-tone temperament. The classical system of instrumental tuning. **15:** 12—1943

Wiggins, A. M. Mechanical impedance bridge. **15:** 50, 79(A)—1943

Williamson, Chas. Keyboard instrument in just intonation. **15:** 173—1944

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Woolf, William L. Acoustical tables for air and sea water. **15:** 83—1943

Young, Robert W. Review of acoustical patents. **15:** 67, 141—1943; **15:** 193, 230—1944

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Acoustic laboratory in the new RCA laboratories. Harry F. Olson. **15:** 80—1943
Steady state of sound in a room. H. P. Knauss and J. G. Woodward. **15:** 80—1943

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PAPER

Acoustic laboratory in the new RCA laboratories. Harry F. Olson. **15:** 96—1943

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Acoustics for broadcasting studios for speech *versus* music. Edward J. Content. **15:** 80—1943
Acoustic laboratory in the new RCA laboratories. Harry F. Olson. **15:** 80—1943
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2.6 Noise Reduction by Increased Room Absorption

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Application of sound absorption to factory noise problems. Hale J. Sabine and R. Allen Wilson. **15:** 27—1943

ABSTRACT

Application of sound absorption to factory noise problems. Hale J. Sabine and R. Allen Wilson. **15:** 80—1943

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Demountable soundproof rooms. W. S. Gorton. **15:** 80—1943

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Acoustic wave filter panel. **15:** 141—1943
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2.11 Vibration Insulating Supports

PATENT

Vibration-free mounting. **15:** 141—1943

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Introduction to biophysics. Otto Stuhlman, Jr. **15:** 138—1943
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4. Ear and Hearing

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Direct observations of the acoustic oscillations of the human ear. H. G. Kobrak. **15:** 54—1943

4.2 Anatomy and Physiology of the Ear

PAPER

Direct observations of the acoustic oscillations of the human ear. H. G. Kobrak. **15:** 54—1943

ABSTRACT

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PAPERS

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Is the threshold audiogram sufficient for determining hearing capacity? Edmund Prince Fowler. **15:** 57—1943

Statistical trends among hearing aid users. Einar Strommen. **15:** 211—1944

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Estimation of percentage loss of hearing. Howard A. Carter. **15:** 77—1943

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Ear defenders. Norman A. Watson and Vern O. Knudsen. **15:** 153—1944

Experiments on Dr. Pohlman's mechanical hearing aids. Karl Lowy and Nathan Gross. **15:** 160—1944

Statistical trends among hearing aid users. Einar Strommen. **15:** 211—1944

PATENTS

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ABSTRACT

Reinvestigation of the relation between pitch and intensity. Clifford T. Morgan and Robert Galambos. **15:** 77—1943

.10 Subjective Tones

On subjective tones. John D. Trimmer. **15:** 136—1943

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Mechanical impedance bridge. A. M. Wiggins. **15:** 50—1943

ABSTRACTS

Acoustic impedance meter for rapid field measurements. R. H. Bolt and A. A. Petrauskas. **15:** 79—1943

Mechanical impedance bridge. A. M. Wiggins. **15:** 79—1943

5.51 Broadcasting

ABSTRACTS

Acoustics for broadcasting studios for speech *versus* music. Edward J. Content. **15:** 80—1943

Materials and construction for speech broadcasting studios. Lonsdale Green, Jr. **15:** 80—1943

5.7 Frequency Standards. Frequency Measuring and Recording Instruments. Hearing Instruments (see 4.5 and 5.5)

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Tuning device. **15:** 67—1943

Vibratory instrument. **15:** 143—1943

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Conditions for wide angle radiation from conical sound radiators. Richard W. Carlisle. **15:** 44—1943

Mechanical impedance bridge. A. M. Wiggins. **15:** 50—1943

ABSTRACT

Conditions for wide angle radiation from conical sound radiators. R. W. Carlisle. **15:** 79—1943

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Electric megaphone. **15:** 67—1943

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Method of assembling the magnet system for acoustic devices. **15:** 68—1943

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5.9 Microphones. Vibration Microphones. Microphone Calibration Equipment

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Acoustic laboratory in the new RCA laboratories. Harry F. Olson. **15:** 96—1943

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5.13 Public Address Systems and Sound Picture Installations

PATENT

Electric power megaphone system. **15:** 145—1943

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (see also 5.4)

PAPER

Response of a linear rectifier to signal and noise. W. R. Bennett. **15:** 164—1944

PATENTS

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Stylus head for recording and reproducing sound records. **15:** 147—1943
Turntable drive mechanism. **15:** 199—1944
Variable speed playback for sound machines. **15:** 71—1943
Vibration translating system. **15:** 72—1943

5.17 Telephones, Telephone Receivers

Improved telephone receiver analysis. R. D. Fay. **15:** 32—1943

6. Musical Instruments and Music

6.1 General, Unclassified

PAPERS

Attitudes toward types of industrial music. W. A. Kerr. **15:** 125—1943
Growing appreciation of music and its effect upon the choice of music in industry. Abe Pepinsky. **15:** 176—1944
Industrial music and morale. Dan D. Halpin. **15:** 116—1943
Mean-tone temperament. The classical system of instrumental tuning. William Braid White. **15:** 12—1943
Music as a safety factor. Edith Hough. **15:** 124—1943
Programming music for industry. Ben Selvin. **15:** 131—1943
Statistical method in determining the effects of music in industry. R. L. Cardinell. **15:** 133—1943

ABSTRACTS

Attitudes toward types of industrial music. W. A. Kerr. **15:** 78—1943

Effect of music on accident reduction. Edith Hough. **15:** 78—1943
Growing appreciation of music and its effect upon the choice of music in industry. Abe Pepinsky. **15:** 78—1943
Industrial music and morale. Dan D. Halpin. **15:** 77—1943
Introduction to music in industry. Harold Burris-Meyer. **15:** 77—1943
Programming music for industry. Ben Selvin. **15:** 78—1943
Statistical method in determining the effects of music in industry. R. L. Cardinell. **15:** 78—1943

PATENTS

Manufacture of harmonicas. **15:** 203—1944
Musical instrument. **15:** 147—1943
Reed for musical instruments. **15:** 72—1943
Reed holder. **15:** 148—1943
Valve and valve seat for accordions. **15:** 72—1943

6.2 Bells

PAPER

Some experiments on an elephant bell. H. D. Brailsford. **15:** 180—1944

PATENT

Sound signal. **15:** 148—1943

6.3 Brass

PATENTS

Musical instruments. **15:** 204—1944
Mute. **15:** 204—1944
Wind musical instrument. **15:** 72—1943

6.4 Drums and Traps

PATENTS

Maraca. **15:** 205—1944
Piano-vibraphone. **15:** 204—1944
Xylophones. **15:** 205—1944

6.5 Organs

PAPER

Keyboard instrument in just intonation. Chas. Williamson. **15:** 173—1944

ABSTRACT

Overblowing of organ pipes. C. P. Boner and R. B. Newman. **15:** 76—1943

PATENT

Key action mechanism. **15:** 206—1944

6.6 Pianos

PAPERS

Mean-tone temperament. The classical system of instrumental tuning. William Braid White. **15:** 12—1943
Observations on the vibrations of piano strings. O. H. Schuck and R. W. Young. **15:** 1—1943

ABSTRACT

Observations on the vibrations of piano strings. O. H. Schuck and R. W. Young. **15:** 76—1943

PATENTS

Piano actions. **15:** 73, 148—1943
Piano key action testing device. **15:** 206—1944

6.7 Violin Family

ABSTRACT

Criteria of excellence in violins. F. A. Saunders. **15:** 76—1943

PATENTS

Guitar and guitar nut. **15:** 149—1943
Musical instrument. **15:** 149—1943
Stringed musical instruments. **15:** 149—1943; 206, 207—1944
Violin. **15:** 206—1944

6.8 Wood Winds

PATENTS

Reeds. **15:** 207—1944
Tampion. **15:** 149—1943

6.9 Electronic Musical Instruments

PATENTS

Electrical musical instruments. **15:** 150—1943; 207—1944
Electrical pick-up for stringed musical instruments. **15:** 73—1943
Electric organ keying system. **15:** 208—1944
Electric piano. **15:** 150—1943
Electrostatic alternator. **15:** 208—1944
Musical instrument. **15:** 73, 74—1943
Photoelectric musical instrument. **15:** 208—1944
Piano construction. **15:** 74—1943

7. Noise

7.1 General, Unclassified (see also 5.15)

ABSTRACT

Filtered thermal noise—fluctuation of energy as a function of interval length. S. O. Rice. **15:** 79—1943

7.6 Noise in Buildings (see also 2.2)

PAPERS

Application of sound absorption to factory noise problems. Hale J. Sabine and R. Allen Wilson. **15:** 27—1943
Discussion of acoustic cells for airplane engine test buildings. Dariel Fitzroy. **15:** 106—1943
Sound-proof airplane motor test chambers. I. E. Katel. **15:** 114—1943

PATENT

Sound arrester in the ventilator of sound-arresting room. **15:** 150—1943

7.7 Machinery Noise

PAPERS

Discussion of acoustic cells for airplane engine test buildings. Dariel Fitzroy. **15:** 106—1943

Sound-proof airplane motor test chambers. I. E. Katel. **15:** 114—1943

SUBTITLE

Noise levels of various machines at distance of 3 feet. Hale J. Sabine and R. Allen Wilson. **15:** 28—1943

PATENTS

Acoustic filter. **15:** 74—1943

Air cleaner. **15:** 75—1943

Air cleaner and silencer. **15:** 74—1943

Combined air cleaner and silencer. **15:** 151—1943

Cooling exhaust conduits. **15:** 151—1943

Mufflers. **15:** 151, 152—1943

Resonance units. **15:** 152—1943

Resonator silencer. **15:** 209—1944

Silencers. **15:** 74, 151—1943; 209—1944

8. Standards

9. Speech and Singing

9.1 General, Unclassified

PATENT

Plural syllable sound originator. **15:** 75—1943

9.2 Anatomy of Speech Organs

ABSTRACT

Acoustical characteristics apparent in a new anatomy of the human voice. Claire Benedict. **15:** 77—1943

10. Supersonics (Ultrasonics)

10.3 Supersonic Instruments

PATENT

Apparatus for transforming oscillations. **15:** 152—1943

10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)

PAPERS

Supersonic measurements in CO_2 and H_2O at 98°C. W. H. Pielemeier and W. H. Byers. **15:** 17—1943

Supersonic measurements in CO_2 at 0° to 100°C. W. H. Pielemeier. **15:** 22—1943

Use of the Pierce interferometer for measuring the absorption of sound in gases. Howard C. Hardy. **15:** 91—1943

11. Waves and Vibrations

11.1 General, Unclassified

SUBTITLE

Relations between hypergeometric and Bessel functions. W. R. Bennett. **15:** 171—1944

11.3 Propagation of Sound. Absorption during Propagation. Velocity of Sound. (See also 10.4)

PAPERS

Acoustical tables for air and sea water. William L. Woolf. **15:** 83—1943

Extension of the Doppler principle to discontinuous periodic effects. Lionel Fleischmann **15:** 103—1943

11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance. (See also 5.3)

PAPERS

Acoustical tables for air and sea water. William L. Woolf. **15:** 83—1943

Letter to the editor. Vincent Salmon. **15:** 225—1944

Mechanical impedance bridge. A. M. Wiggins. **15:** 50—1943

Notes on radiation impedance. B. B. Bauer. **15:** 223—1944

Reactance slide rule. **15:** 62—1943

ABSTRACT

Conditions for wide angle radiation for conical sound radiators. R. W. Carlisle. **15:** 79—1943

Exhibition of force at the entrance of a resonator. R. L. Leadbetter. **15:** 78—1943

Mechanical impedance bridge. A. M. Wiggins. **15:** 79—1943

11.5 Sounds of Finite Amplitude. Distortion

PAPER

Damping of large amplitude vibrations of a fluid in a pipe. R. C. Binder. **15:** 41—1943

11.6 Sound in Tubes

PAPER

Damping of large amplitude vibrations of a fluid in a pipe. R. C. Binder. **15:** 41—1943

11.7 Theory of Waves and Vibrating Systems. (See also 5.4)

PAPERS

Acoustical tables for air and sea water. William L. Woolf. **15:** 83—1943

Dynamical analogies. Harry F. Olson. **15:** 189—1944

Extension of the Doppler principle to discontinuous periodic effects. Lionel Fleischmann. **15:** 103—1943

Response of a linear rectifier to signal and noise. W. R. Bennett. **15:** 164—1944

ABSTRACTS

Exhibition of force at the entrance of a resonator. R. L. Leadbetter. **15:** 78—1943

Filtered thermal noise—fluctuation of energy as a function of interval length. S. O. Rice. **15:** 79—1943

Overblowing of organ pipes. C. P. Boner and R. B. Newman. **15:** 76—1943

Vibration characteristics of "free-free" circularly curved bars. F. P. Bundy, W. A. Pliskin, and J. E. Edwards. **15:** 76—1943

12. General, Unclassified